



Towards an Ontology-Based Approach to Support Monitoring the Data of the International Monitoring System (IMS)

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The heterogeneity of the distributed processing systems, monitored data and resources is an obvious challenge in monitoring the data of International Monitoring System (IMS) of the Comprehensive Nuclear Test-Ban Treaty organization (CTBTO). Processing engineers, analysts, operators and other interested parties seek for intelligent tools and software that hide the underlying complexity of the systems, allowing them to manage the operation and monitoring the systems at a higher level, focusing on what the expected behavior and results should be instead of how to specifically achieve it. Also, it is needed to share common understanding of the structure of organization information, data, and products among staff, software agents, and policy making organs. Additionally, introducing new monitoring object or system should not complicate the overall system and should be feasible. An ontology-based

approach is presented in this paper aiming to support monitoring real-time data processing and supervising the various system resources, focusing on integrating and sharing same knowledge and status information of the system among different environments. The results of a prototype framework is presented and analyzed.